

49. Apparatus as set forth in Claim 46, and further including pilot means at a station adjacent said punch means for engaging and accurately locating a disc while said punch means are cutting said slot means.

50. Apparatus as set forth in Claim 49, wherein said pilot means comprises straddle pilots engageable with said discs.

51. A process as set forth in Claim 45, and further including the step of engaging and accurately locating a disc while cutting said slots means.

52. Apparatus according to Claim 20, wherein said bridges have an arcuate shape.

53. Apparatus according to Claim 22, wherein said bridge means has an arcuate shape.

54. Apparatus according to Claim 22, wherein said bridge means has a chevron shape.

REMARKS:

Applicant and his attorney wish to thank Mr. Woods and Mr. Phon for the courteous interview on April 6, 1992.

A number of claims of this application are being canceled without prejudice in order to expedite the prosecution of this application, and will be included in a continuation-in-part patent application to be filed shortly. The claims remaining in this application are clearly distinguishable from and patentable over the prior art cited in this application.

Independent Claims 3, 46 and 47 cover a progressive die for shaping a series of discs in a strip, and recite, among other things, means for cutting slots which form deformable bridges between and connecting adjacent discs. Claim 3 further recites that the bridges are cut at an angle relative to the center line; Claim 46 further recites that the length of the bridges is greater than the width of the slots; and Claim 47 further recites pilots adjacent the slot cutting means for accurately locating the discs while the slots are being cut. Claims 4, 18 to 21, 24

and 25 are dependent on Claim 3, Claims 49 and 50 are dependent on Claim 46, and Claim 48 is dependent on Claim 47.

The foregoing features are not shown or suggested by the references of record. The Archer patent describes a die for cutting coil stock, wherein lateral slots 14 are cut to form a connecting neck 16. According to Archer, the neck may flex or bend in order to correct for or accommodate a camber problem. It is submitted that the Archer construction, and the structure shown in Figure 1 of this application, would not correct for a progression problem as described in this application. It should be kept in mind that camber and progression problems have persisted for many years throughout the industry. If the Archer patent presented a workable solution to these problems, it is submitted that the Archer teachings would have been adopted long ago. Even though the Archer patent expired in 1980, the method described therein is not, to applicant's knowledge, in use in the industry. The arrangement shown in Figure 1 of this application has been used, and progression misalignment has been a problem with that arrangement.

Further, independent Claim 3 adds the recitation that the bridges are at an angle relative to the center line, and this shape increases the capacity of the bridges to elongate or contract. The Archer patent, the construction illustrated in Figure 1 herein, and the other prior art do not show this shape.

Independent Claim 46 adds the statement that the length of the bridges is greater than the width of the slot, which is another way of defining the shape of the connecting bridges. In Archer and Figure 1 of this application, the slots have the same width as the length of the connecting pieces.

Claim 47 adds the recitation of pilot means adjacent the die station where the slots are cut. With reference to Figure 2 of this application, the straddle pilots 52 engage and accurately locate the disc 40a at station A while the slots 57 are being cut. While straddle pilots, per se, were previously known, the inventor is not aware of their use at an initial die station for cutting lateral slots between sections or discs of lamination strip stock.

It is therefore submitted that the subject matter of independent Claims 3, 46 and 47, and the claims dependent thereon, is not shown or suggested by the prior art, and those claims are allowable.

Independent Claims 7 and 44, and Claims 8, 10, 26 and 27 which are dependent on Claim 7, are drawn to the structure of the lamination strip and they also recite the deformable bridges connecting adjacent discs. Claim 7 further defines the shape of the bridges, and Claim 44 further states that the length of the bridges is greater than the width of the slots. The importance and difference from the prior art of these limitations is discussed above.

Independent Claims 13, 14 and 45 recite the process of shaping lamination discs or sections, including the steps of cutting slots to form narrow deformable bridges between discs. Claims 16, 28 and 29 are dependent on Claim 13 and Claim 15 is dependent on Claim 14, and, of course, they also contain these limitations. Claim 13 further recites the step of engaging the outer sides of the disc (the pilots) to orient the disc while cutting the slots. Claim 14 further recites the step of cutting the bridges at an angle relative to the center line, and Claim 45 further recites the step of cutting the bridges with a longer length than the width of the slots. Again, these limitations are discussed above in connection with the claims on the die and the strip.

Independent Claims 17 and 22 are drawn to the combination of a progressive die and a lamination strip cut by the die; Claims 30 and 31 are dependent on Claim 17 and Claim 23 is dependent on Claim 22. These claims also recite the narrow deformable bridges connecting adjacent discs. Claim 17 further adds the limitation that the bridges are at an angle relative to the center line, and Claim 22 adds the recitation of straddle pilots for accurately locating a disc. The significance and difference from the prior art are, of course, discussed above.

It should be apparent from the foregoing that all of the claims remaining in this application are clearly distinguishable from and patentable over the prior art, and it is urged that this application be passed to issue.

The Examiner is urged to telephone the undersigned attorney
with any questions or comments.

Respectfully submitted,

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Date: April 30, 1992



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